



## Staff Report

**TO:** City Council  
**FROM:** Sean Thuilliez, Chief of Police  
**DATE:** September 6, 2022  
**SUBJECT:** **Approval to Purchase One (1) DJI Matrice 300 Drone (and accessories) and Four (4) DJI Phantom 3 Drones (and accessories) from Drones Made Easy in a total amount not to exceed \$56,000.**

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### **Background and Analysis:**

The Beaumont Police Department implemented a DJI Matrice 200 drone for police operations in 2017. In that time, the aircraft has been used to document crime/accident scenes, photograph transient camps, map railroad clean-ups, search for lost/missing persons and monitor firework violations.

Drone technology has improved significantly over the last five years making the use of such equipment an essential part of law enforcement operations nationwide. However, the current DJI Matrice 200 aircraft has exceeded its operational life span and needs to be replaced.

The Beaumont Police Department is also looking to supplement its current drone program by purchasing four smaller DJI Mavic 3 drones for use by the Patrol Division. These drones are portable and can be quickly put into service to aid officers. Each Patrol shift will be assigned a drone which can be utilized 24-hours a day, 7 days a week.

The City of Beaumont has grown to over 54,000 residents and is continuing to grow with development. The City encompasses 32 square miles with a large portion being rural and canyon. The City experiences extreme weather conditions, where temperatures range from 20 degrees to over 110 degrees at times. The climate and topography of the City, as well as the location between major interstates creates a unique and ideal location where the use of an aerial photography platform can become a vital asset to both the community and surrounding neighbors. The concept of a Beaumont Police Unmanned Aerial Systems program would be to utilize the devices in the following major categories:

## **· Missing Persons/Search and Rescue**

The City's increasing population includes an aging segment of the community with three 55 plus communities and a residential medical facility that houses Alzheimer's and Dementia patients. Often, persons who suffer from these ailments are prone to wander. The rural areas with extreme weather can create dangerous situations for these persons if not quickly located. The UAS has the potential to reduce hours spent searching for missing persons by locating them quickly and efficiently. Should a thermal imaging camera be acquired, it would give the platform unrivaled day and night capabilities.

## **· Critical Infrastructure Mapping/Planning**

The use of a UAS can provide City personnel with vital and nearly instantaneous information on critical infrastructure. Aerial mapping, thermal images, 3D renderings and high-definition photos can help clarify and answer questions regarding the state of our critical infrastructure. These capabilities are especially important when examining the wastewater treatment plant, the Portrero Interchange, traffic chokepoints, etc. These are only a few of the areas where a UAS can be used.

## **· Office of Emergency Services**

A UAS can provide vitally important information such as video footage and photographs that can be used to document damages caused by natural disasters, fires, and man-made incidents.

## **· Event Planning and Monitoring**

Events such as the Cherry Festival draw thousands of residents and visitors every year. The planning of such an event can be aided by using the photographic and mapping equipment of a UAS. The same system can be used to monitor city events, giving officers real-time information as to the nature and location of any occurrence within an event's boundaries.

## **· Hazard Detection and Hazardous Material Response**

The I-10, SR60, SR79 and a major railway line intersect in the City of Beaumont. These transportation corridors bring a significant amount of hazardous material traffic into the area. The I-10 freeway and the rail line are major transportation corridors as they extend from California to Florida. A UAS is an asset to first responders responding to any hazardous material incident that might take place along these routes. An UAS could be used to provide real-time detection and tracking of hazards without exposing first responders to risk.

## **· Suspect Tracking**

UAS can aid in the tracking of suspects who have fled from a fresh crime scene or have fled from a vehicle or location from officers. With the same rural and urban areas, officers are required to track suspects in dense brush or in our more populated areas; a swift apprehension benefits the public safety of our residents.

- School District

Within the City there are 15 schools under Beaumont Unified School District; including a high school and two middle schools. There are seven elementary schools and two charter schools in the City that serve K-12th grade students. The UAS could be available upon request to assist the schools and district with large events, special planning, and active shooter incidents.

Other Considerations:

- Costs

The costs to replace the current DJI Matrice 200 and to upgrade to the Matrice 300 RTK is \$17,399, which includes six batteries. The Matrice 300 will be augmented with the purchase of a Zenmuse H20N thermal zoom camera capable of seeing lost/missing persons and suspects in total darkness (\$12,999.00).

An additional cost of \$4,990 would be incurred to purchase advanced mapping software (Pix-4D Mapper) used to document and re-create crime/accident scenes.

The purchase of four (4) DJI Mavic 4 drones used to augment Patrol would cost \$12,192. This includes additional batteries, propellers, propeller guards and chargers for each unit. Four (4) Tripltek-8 Pro tablets would be needed to control each Mavic 3 drone. The total cost for four tablets is \$3,180. Remote control mounts needed to attach the Tripltek-8 Pro tablets would cost an additional \$348.

In addition, four hard cases used to store and protect each drone would be required. Each hard case costs \$199, accounting for \$796 total for the cases.

The sales tax associated with this purchase is \$3,635.84.

Policy/Risk Management:

The Police Department has adopted and adheres to a UAS policy under its Policy Manual. This policy outlines the procedures for an UAS Program under the Police

Department. The risk management is minimal with this type of program as the aircraft is small, lightweight, reliable, and easy to fly.

#### Privacy Concerns:

The UAS will be used in accordance with State and Federal guidelines and will not be used to arbitrarily monitor persons or their homes.

The UAS will be used in strict adherence and reverence to the Fourth Amendment. It will not be equipped with weapons of any kind nor, will it be used to target any person based solely on individual characteristics such as race, ethnicity, national origin, religion, disability, gender or sexual orientation.

The UAS will always be operated by a human operator and cannot function in an autonomous manner. It will not be equipped with facial recognition or other biometric matching technology.

Nighttime usage of UAS is regulated by the Federal Aviation Administration and such usage will only be permitted with the appropriate approval.

#### SLESA Funding:

A Supplemental Law Enforcement Services Account (SLESA) has been established in each county of the state, for the purpose of overseeing and allocating funding being provided by the State of California's Citizens Options for Public Safety (COPS) Program, for the purpose of funding "frontline law enforcement services." City funding allocations are distributed based on population estimates provided by Chapter 353 of the Budget Act for the particular year funding.

In accordance with Government Code Section 30061 and 30063, the City Council shall approve the appropriation of the anticipated funding by approving a written request in the form of an "Expenditure Plan." The County of Riverside Sheriff's Department is designated as the Supplemental Law Enforcement Oversight Committee and must certify receipts and approval of the City's "Expenditure Plan" prior to submitting it to the County Board of Supervisors for review and approval, who will subsequently authorize the County Auditor/Controller to release the funding.

The Expenditure Plan requirement requests the identification of the category (or categories) for which the Police Department intends to expend the current funding. It has previously been determined by this City Council that SLESA funds would support

the Police Cadet program along with Technology to enhance front-line law enforcement services. This UAS program is in line with the technology aspect of the “Expenditure Plan.”

Three competitive bids for drone equipment were requested from Drones Made Easy, DroneNerds, Advexure. The quote from DroneNerds was never provided to us by the vendor.

The quote from Advexure was \$843.92 less than Drones Made Easy however, the company only has an online presence whereas Drones Made Easy has a physical location where drones can be taken for repairs, inspections, etc.

**Fiscal Impact:**

There is no fiscal impact to the General Fund and any proposed costs associated with this UAS Program will be applied to the SLESA grant (SS 220-0000-7090-0000) which allows the Police Department to spend funds on front line law enforcement technology.

**ITEM COST**

- 1) DJI Matrice 300 RTK drone with 6 TB 60 batteries \$17,399
- 1) Zenmuse H20N thermal camera \$12,999
- 4) DJI Mavic 3 drones with accessories \$12,192
- 4) Tripltek-8 Pro tablets \$3,180
- 4) Tripltek-8 Pro mounts \$348
- 4) Hard cases for Mavic 3 \$796
- 1) Pix4-D mapping software \$4,990
- Sales Tax \$3,635.84
- Total \$55,539.84

**Recommended Action:**

- 1. Approve the purchase of five (5) drones and equipment from Drones Made Easy in the amount not to exceed \$56,000

**Attachments:**

- A. . Quote from Drones Made Easy for DJI 300 UAS and Zenmuse H20N with batteries and accessories; quote for four (4) DJI Mavic 3 UAS and associated hardware.
- B. Quote from Advexure for DJI 300 UAS and Zenmuse H20N with batteries and accessories; quote for four (4) DJI Mavic 3 UAS and associated hardware.
- C. Pix4-D Mapper software pricing list.